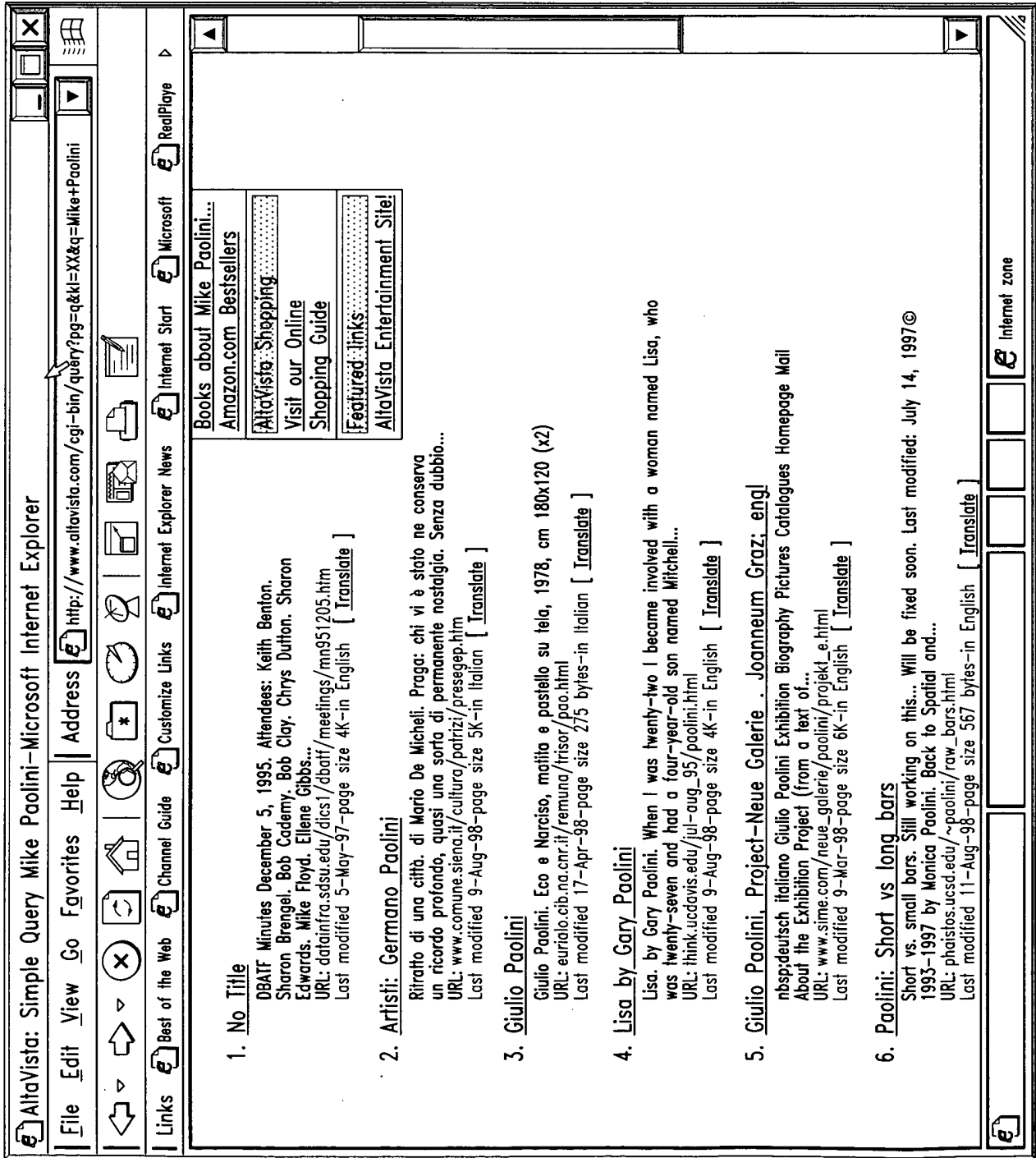10/662,611
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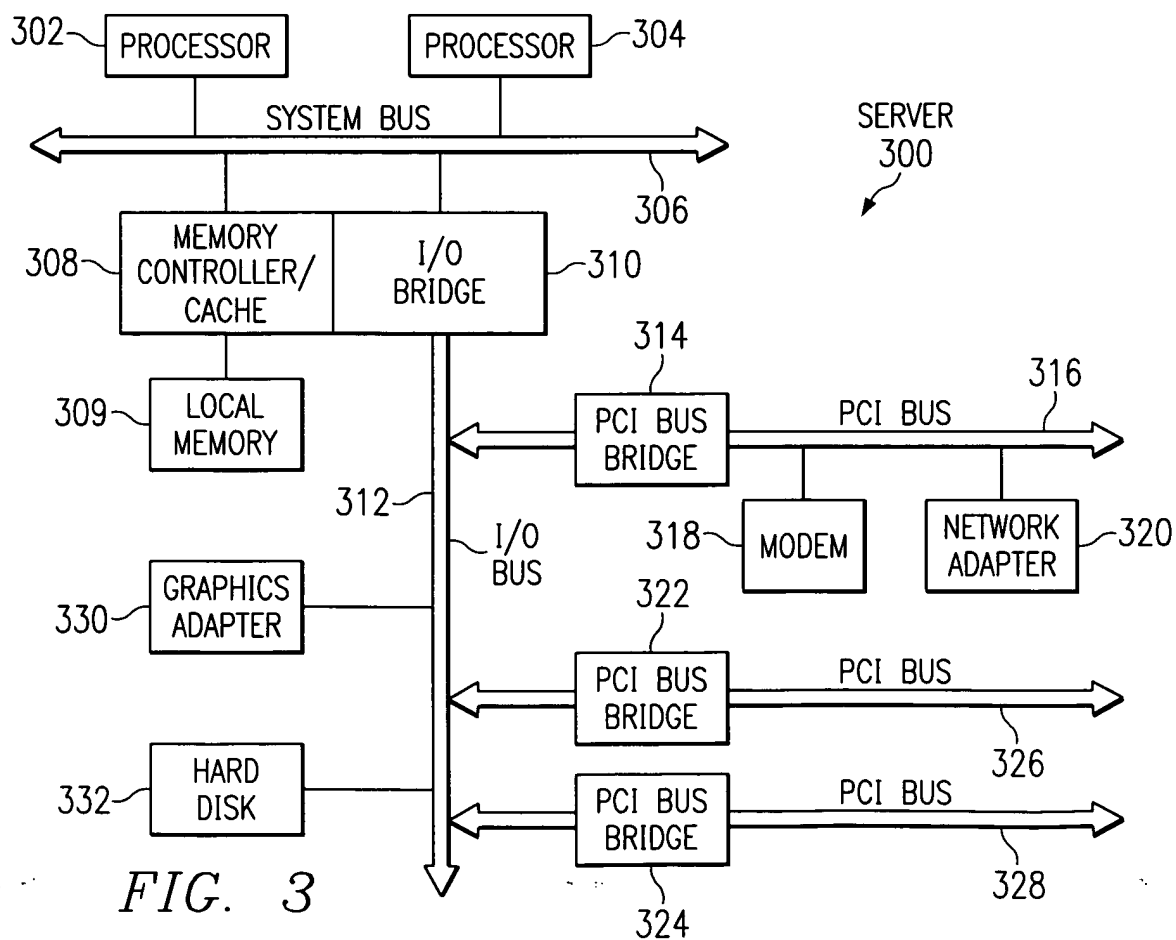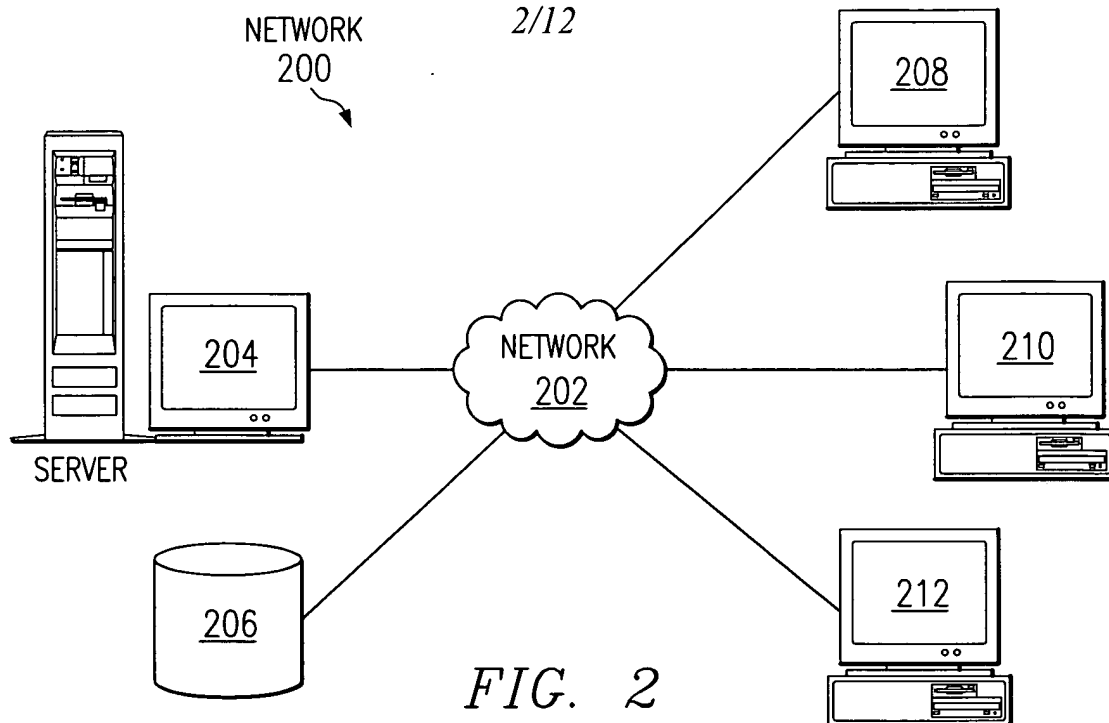
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NETWORK
200

FIG. 2

FIG. 3

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FIG. 4

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FIG. 5

WEB 508

REQUEST FOR WEB PAGE

WEB PAGE

506

CLIENT
BROWSER

504

BROWSER REQUEST

MODIFIED WEB PAGE

PROXY SERVER

502

FIG. 6

605 — USER SELECTS WEB PAGE

610 — SERVER PARSES WEB PAGE FOR LINKS

615 — SERVER CHECKS CACHE

620 — SERVER PREFETCHES LINKED PAGES NOT CACHED

625 — SERVER GENERATES THUMBNAILS OF LINKED PAGES NOT CACHED

630 — SERVER SENDS WEB PAGE AND THUMBNAILS TO CLIENT

FIG. 7

RECEIVE REQUEST FOR WEB CONTENT — 710

715
HAS USER SELECTED THUMBNAIL OPTION?

NO

SEND WEB PAGE WITHOUT THUMBNAILS

720

YES

PARSE WEB PAGE FOR LINKS — 725

GET CACHED PAGES AND PREFETCH LINKED PAGES — 730

GENERATE THUMBNAILS OF UNCACHED PAGES — 735
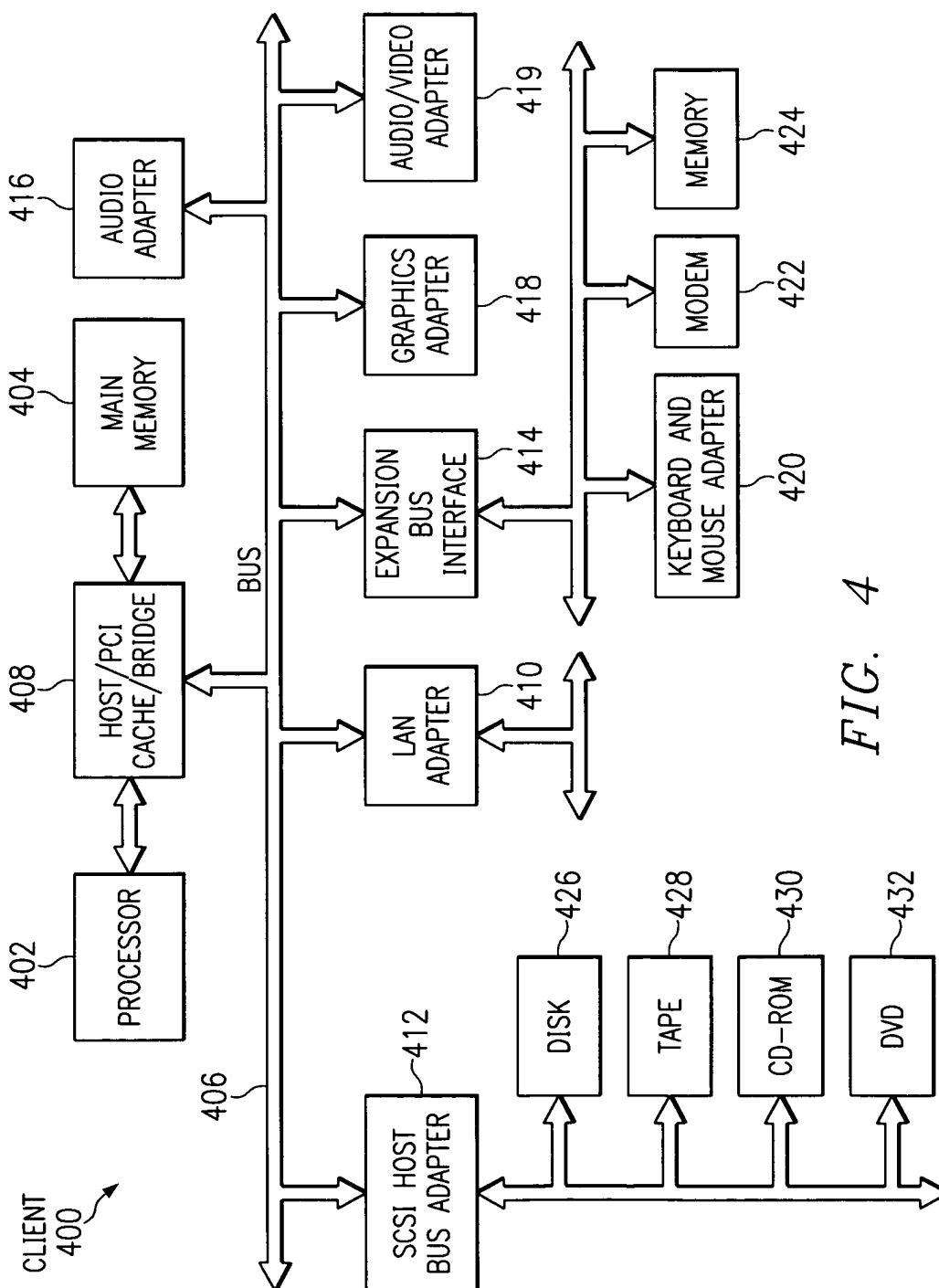
CACHE NEW THUMBNAILS — 740

SEND THUMBNAILS — 750

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FIG. 8

~800

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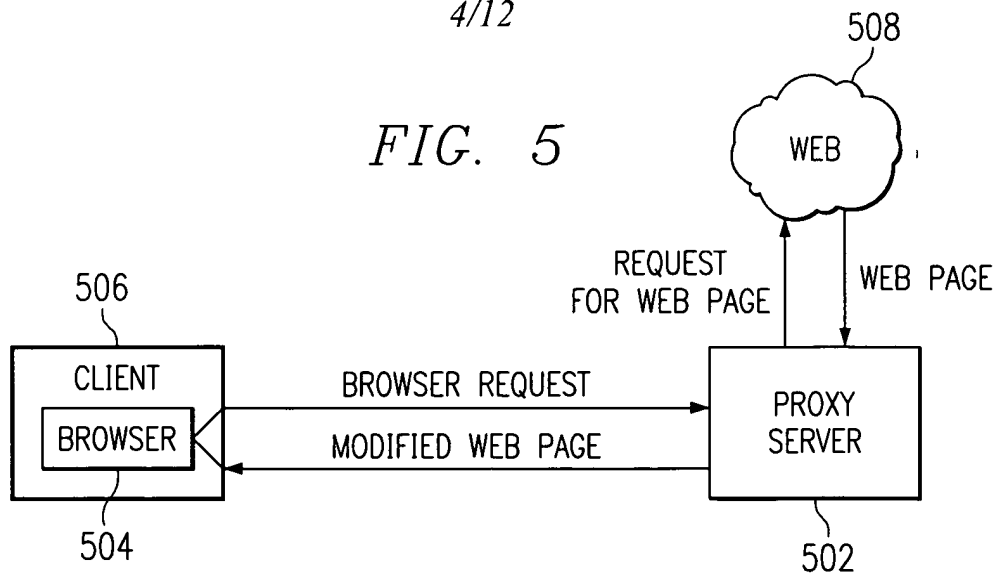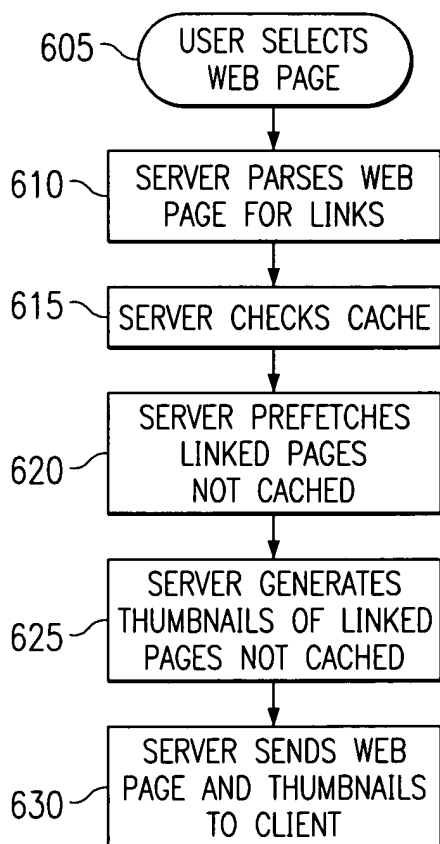
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FIG. 9

905 — RECEIVE REQUEST FOR WEB PAGE AND USER CRITERIA

910 — RETRIEVE WEB PAGE

920 — PARSE WEB PAGE FOR USER CRITERIA

930 — PARSE ANY PREFETCHED PAGES FOR USER CRITERIA

940 — APPLY USER CONFIGURED PREFERENCES

950 — CHANGE THE APPEARANCE OF THE WEB PAGE IN RESPONSE TO FINDING CRITERIA IN OTHER WEB PAGES

960 — SEND MODIFIED WEB PAGE TO USER
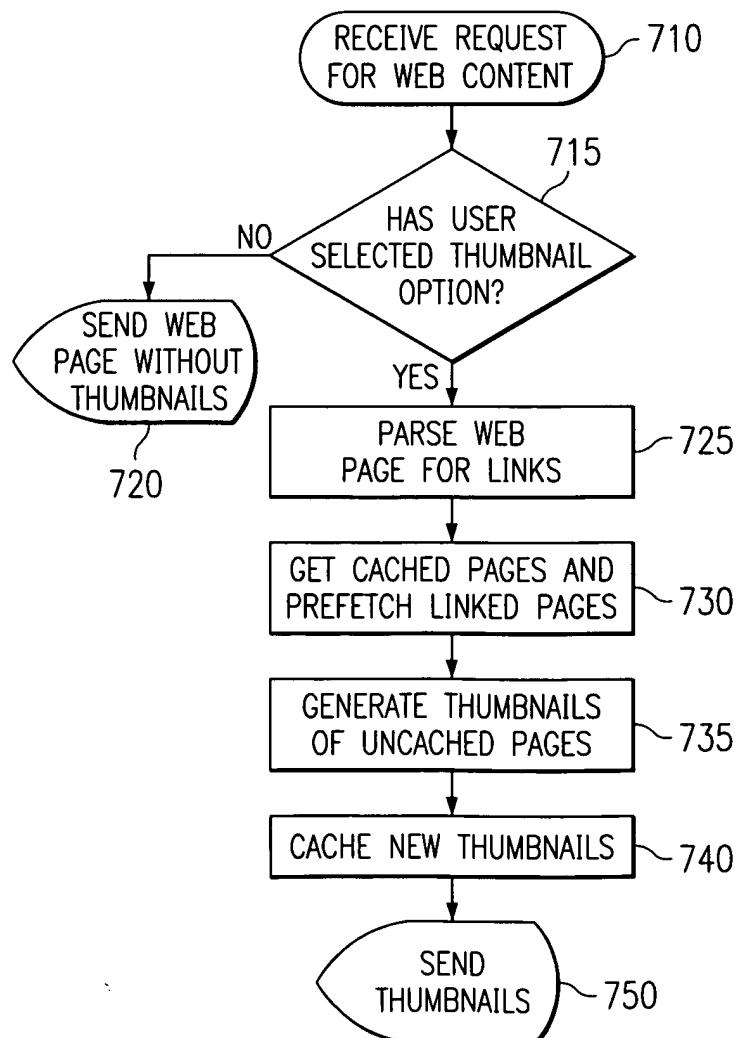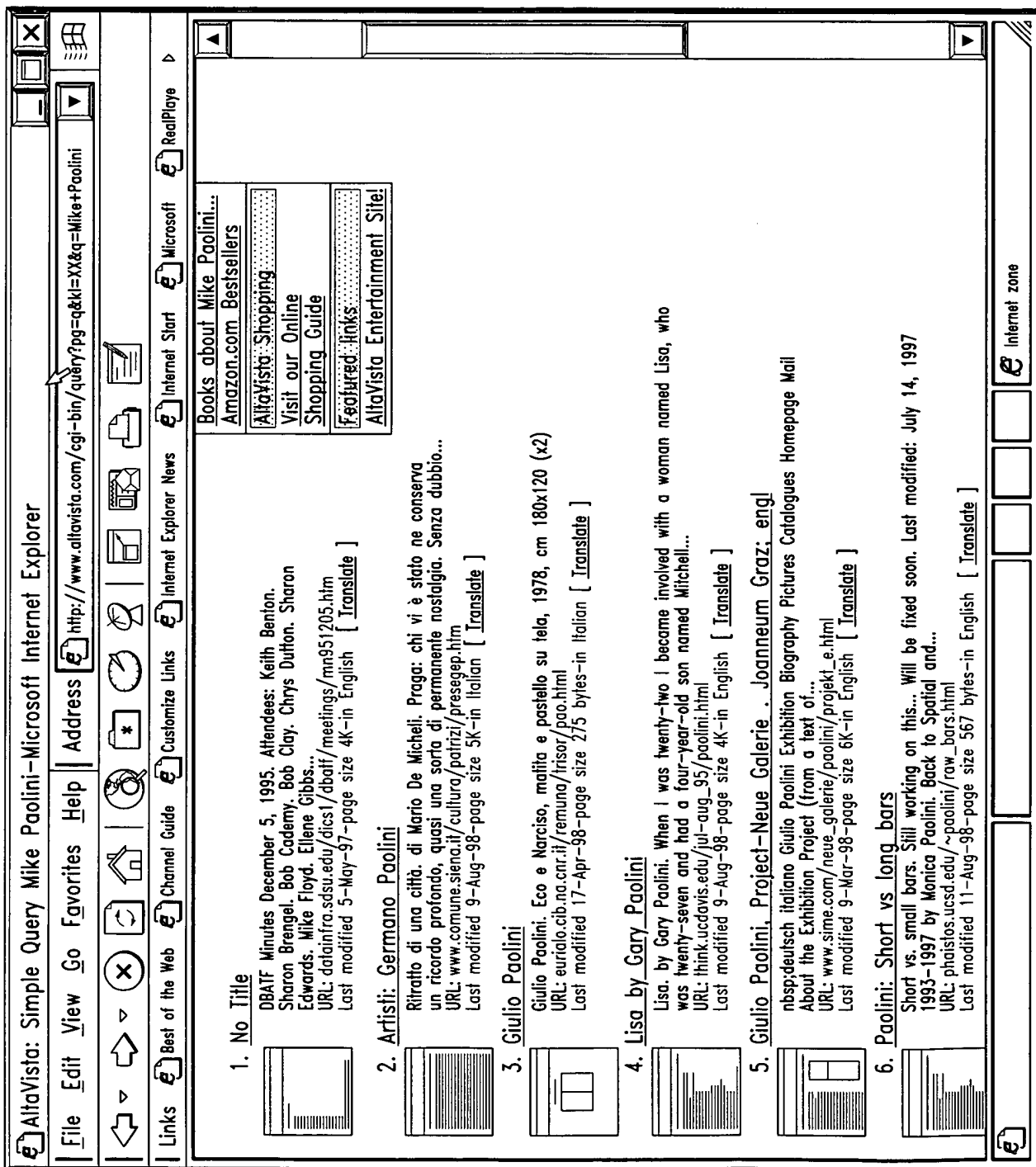
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FIG. 10

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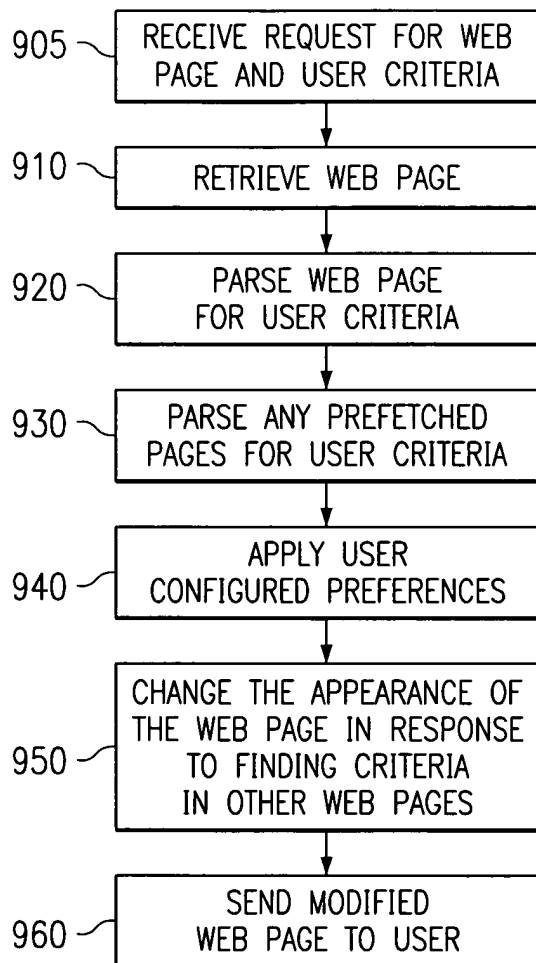Shopping Guide
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FIG. 11A

1110 — USER CONFIGURES CRITERIA PREFERENCES AND DISPLAY SETTINGS FOR THE NAVIGATION ASSISTANT

1120 — USER ACCESSES WEB PAGE

1121 — PARSE WEB PAGE FOR SPECIFIED CRITERIA

1122 — ARE USER SPECIFIED CRITERIA PRESENT ON WEB PAGE?

YES →

1124 — MODIFY WEB PAGE APPEARANCE IN ACCORDANCE WITH USER CONFIGURATION TO INDICATE PRESENCE OF USER SPECIFIED CRITERIA

NO

1126 — HAS USER CONFIGURED DISPLAY SETTINGS WHEN SPECIFIED CRITERIA NOT FOUND?

YES →

1128 — MODIFY WEB PAGE APPEARANCE INDICATING SPECIFIED CRITERIA NOT FOUND ON WEB PAGE

NO

1130 — DO NOT ALTER DISPLAY

1135 — DOES WEB PAGE CONTAIN LINKS?

NO

YES

1150 — FIRST PREFETCHED PAGE IS SCANNED FOR MATCHES TO USER CONFIGURATION

A
TO FIG. 11B

B
TO FIG. 11B

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FROM FIG. 11A

A

1160

ARE USER SPECIFIED CRITERIA PRESENT? — YES →

1165

MODIFY WEB PAGE APPEARANCE IN ACCORDANCE WITH USER CONFIGURATION TO INDICATE PRESENCE OF USER SPECIFIED CRITERIA

NO

1170

HAS USER CONFIGURED DISPLAY SETTINGS WHEN SPECIFIED CRITERIA NOT FOUND? — YES →

MODIFY WEB PAGE APPEARANCE INDICATING SPECIFIED CRITERIA NOT FOUND FOR PARTICULAR LINK

1175

NO

DO NOT ALTER DISPLAY — 1180

DOES PREFETCH CONTAIN ANOTHER LINK? — NO →

1190

FROM FIG. 11A

B

SEND WEB PAGE TO USER — 1193

YES

NEXT PREFETCHED PAGE IS SCANNED FOR CONTENT PREFERENCES

1192

WAIT UNTIL NEW WEB PAGE IS LOADED — 1195

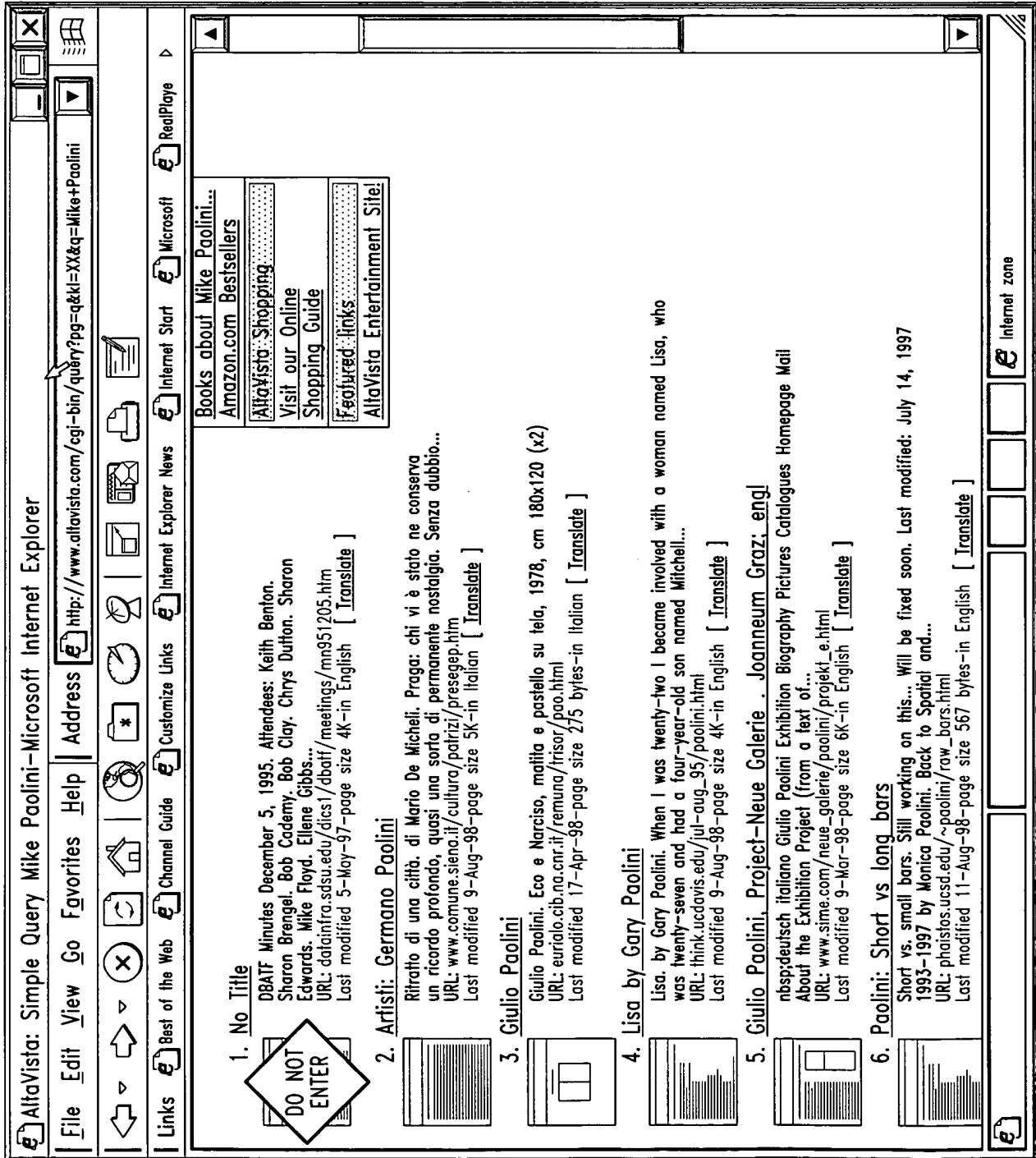*FIG. 11B*

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FIG. 12

1205

NO ← HAS USER CONFIGURED FOR LAYERED PREFETCH?

↓ YES

1210 — DOES LINKED PAGE CONTAIN AN EXCESSIVE NUMBER OF BROKEN LINKS? — YES → ALTER DISPLAY TO INDICATE THAT LINKED PAGE CONTAINS AN EXCESSIVE NUMBER OF BROKEN LINKS

1215

↓ NO

1220 — DOES WEB PAGE CONTAIN NEGATIVE PREFERENCES? — YES → ALTER DISPLAY TO TO INDICATE WARNING

1225

↓ NO

1230 — DOES WEB PAGE CONTAIN MORE THAN A THRESHOLD OF PREFERRED USER CRITERIA? — YES → ALTER USER DISPLAY TO INDICATE LINK EXCEEDS THRESHOLD

1235

↓ NO

1240 — DOES WEB PAGE CONTAIN SOME OF PREFERRED USER CRITERIA? — YES → CONFIGURE DISPLAY TO INDICATE PRESENCE OF SOME OF USER'S PREFERRED CRITERIA

1245

↓ NO

1250 — DOES USER WANT DISPLAY ALTERED TO INDICATE NO MATCH? — YES → 1255 ALTER DISPLAY TO INDICATE NO MATCH TO USER PREFERENCES

↓ NO

1260 — DO NOT ALTER DISPLAY

1270 — CONTINUE PROCESSING WEB PAGE AND OTHER PREFETCHED PAGES

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FIG. 13

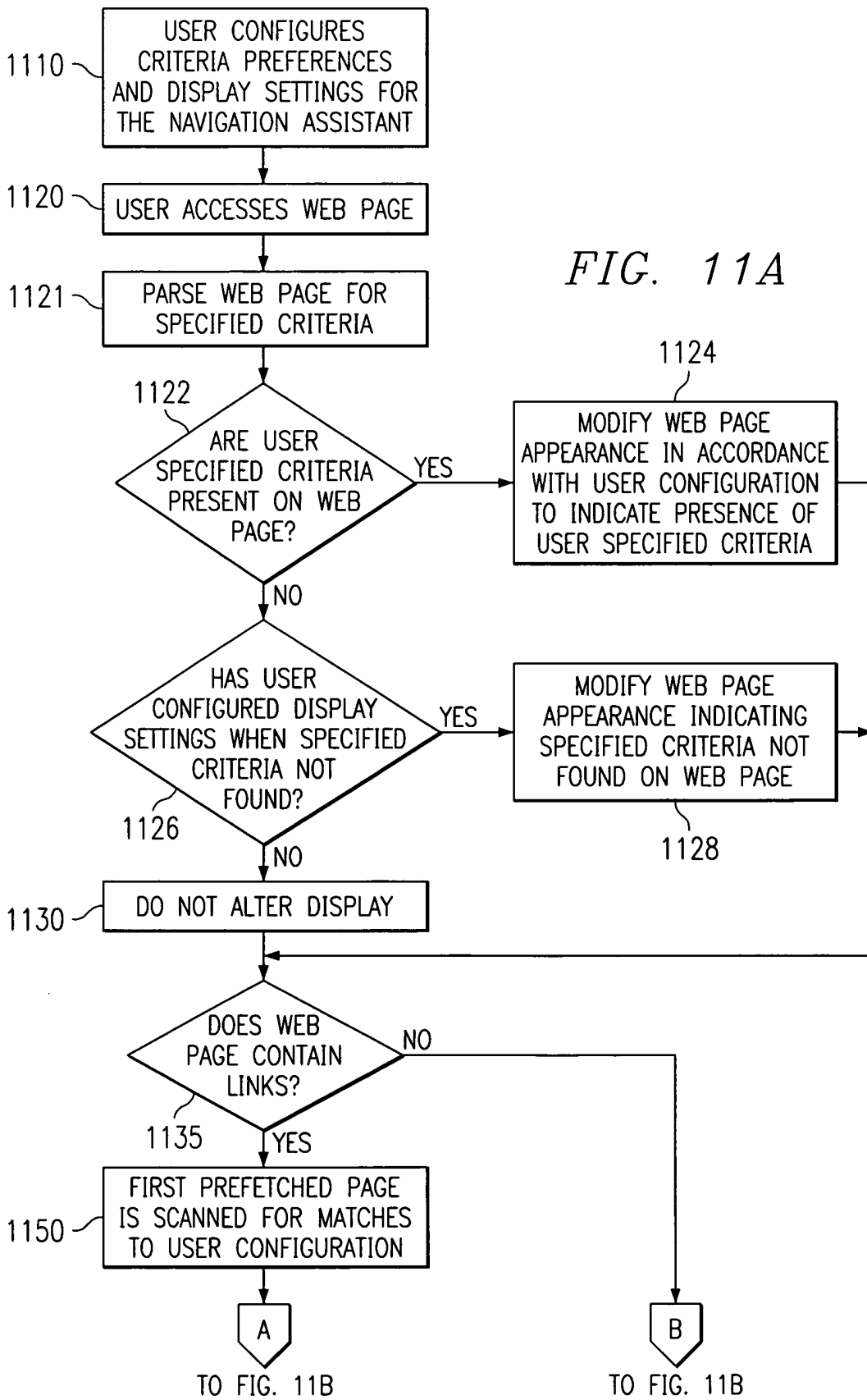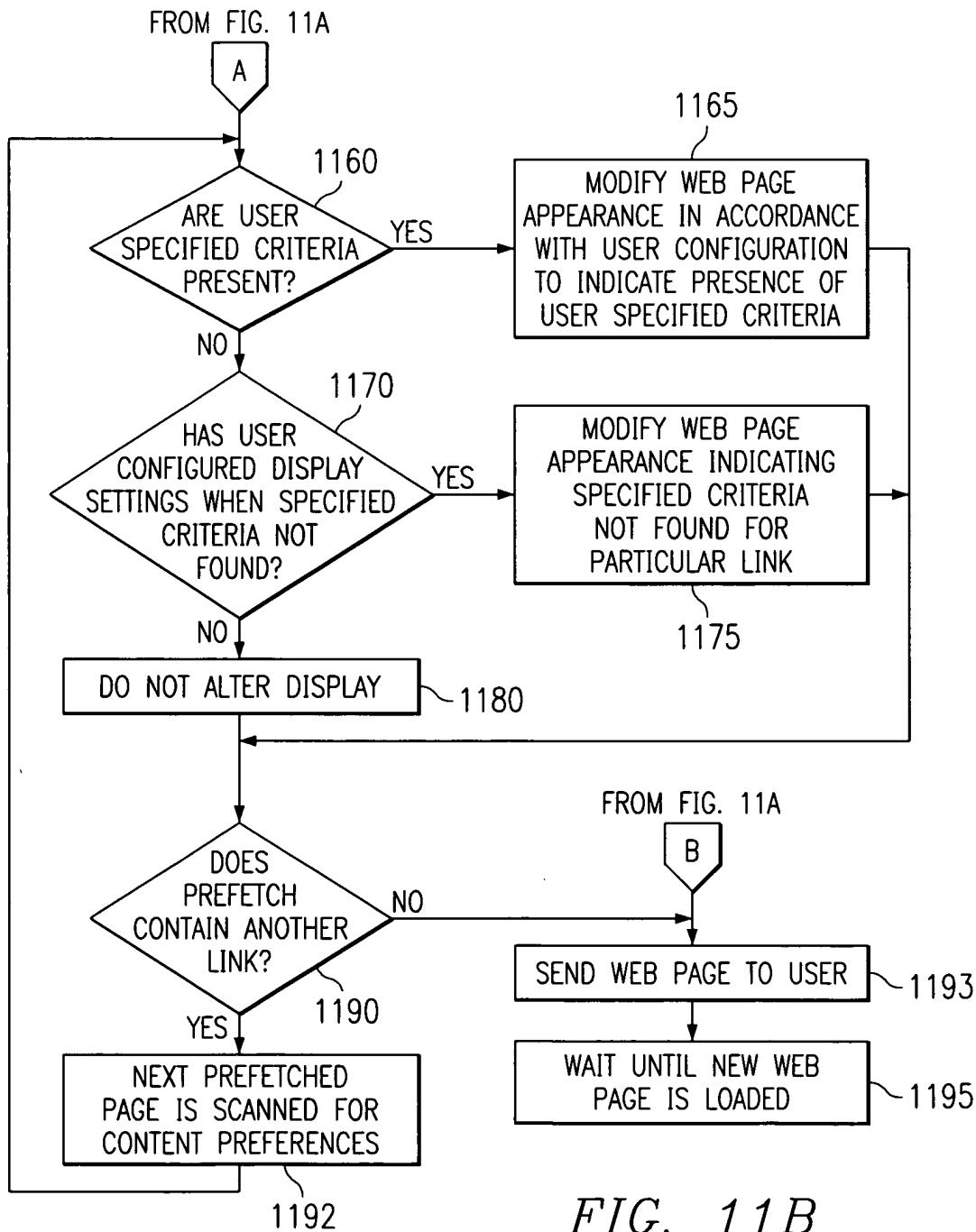AltaVista: Simple Query Mike Paolini–Microsoft Internet Explorer

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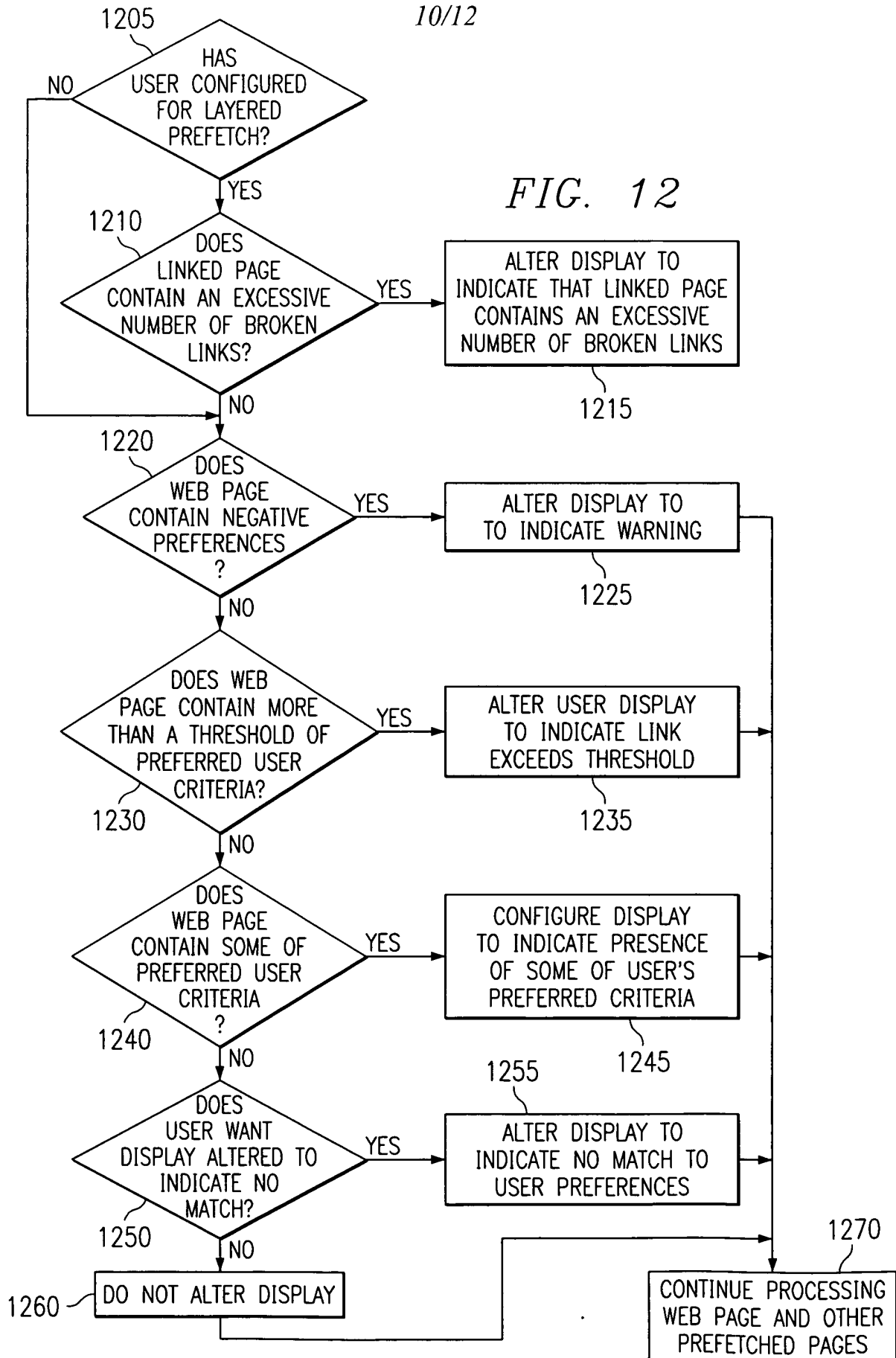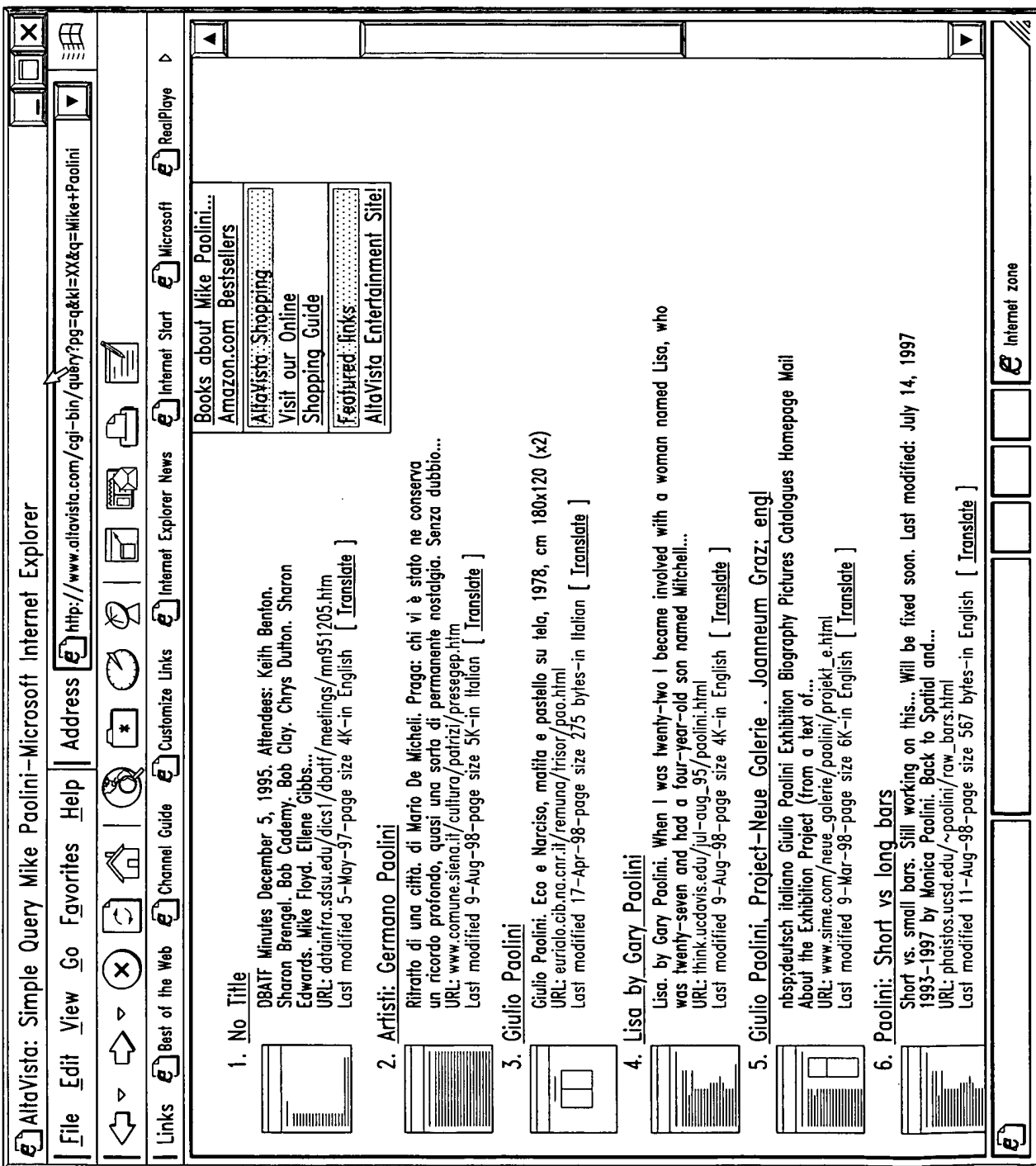10/662,611
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FIG. 14

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